



CITY OF OCEANSIDE

WATER UTILITIES DEPARTMENT

February 19, 1999

Lauren Fondahl
Region 9 Biosolids Coordinator
U.S. Environmental Protection Agency
75 Hawthorne Street, WTR-7
San Francisco, CA 94105-3901

RE: 1998 Annual Sewage Sludge Report, 40 CFR Part 503

Dear Ms. Fondahl,

Enclosed please find the City of Oceanside annual report for sewage sludge for 1998 as required by 40 CFR Part 503.

The City has two wastewater treatment plants. Both San Luis Rey and La Salina Wastewater Treatment Plants (WWTP) are Class I sludge treatment facilities. Waste Management of North County, an Oceanside company, hauled all dewatered sludge from both plants to various agricultural areas within Riverside and San Diego County. During periods of heavy rain, the dewatered sludge was hauled to Copper Mountain Landfill in Yuma, Arizona. Wheelabrator Water Technologies Bio Gro Division, a company that does land application of treated sludge, has a contract with the City of Oceanside for handling all of the land application or disposal of sewage sludge. A total of 1962.4 dry metric tons were generated during 1997. Of the total, 1766.9 dry metric tons were land applied and 195.5 dry metric tons were disposed by landfilling.

This report covers the treatment information and quantity of sewage sludge from both treatment plants. The pollutant levels, pathogen reduction, and vector attraction reduction data are enclosed. Additionally, the Certification statements from Wheelabrator Water technologies, the land applier, are included. These certify that the management practices in §503.14 and the site restrictions in §503.32 (b) (5) have been met for each site on which bulk sewage sludge is applied.

**City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT - 1998**

Date: February 16, 1999

Name of Generator: City of Oceanside Water Utilities Department

Location: San Luis Rey Wastewater Treatment Plant
3950 North River Road
Oceanside, California 92054

Mailing Address: City of Oceanside
Water Utilities Department
300 North Coast Highway
Oceanside, California 92054-2885

Contact Person: Guss Pennell, Environmental Regulatory Compliance Officer

Telephone: 760-966-8795

Flow MGD (average): 9.4 MGD (1998 Effluent average)

Plant Description: The San Luis Rey Wastewater Treatment Plant (WWTP) is an activated sludge treatment facility that has a design capacity of 10.7 MGD. It is a Class I sludge management facility with an approved pretreatment program.

Sludge Treatment Process: This treatment facility has three anaerobic digesters with all in operation at this time. Each digester has a capacity of 630,000 gallons. Normal operation at this facility would consist of two heated and mixed primary digesters (#2 & #3) with a secondary digester (#1) that is heated but not mixed. Primary clarifier sludge is pumped into both of two anaerobic digesters that are mixed and heated. Waste activated sludge is thickened in a dissolved air floatation unit and pumped into the two primary digesters. Digested sludge from the secondary unit would be dewatered and land applied.

During 1998 the overhaul of the #2 primary digester was completed. The floating cover was replaced with a fixed cover and the gas mixing was changed to pump mixing. The digester was cleaned and the interior coating replaced. This project improved the operation of the sludge system and increased the volatile solids reduction capability.

The treated sludge is injected with hydrogen peroxide for odor control prior to dewatering with two 2.2-meter filter belt presses. The dewatered sludge (15.4% Total Solids Annual Average) is loaded into 30 cubic yard end dump trailers and trucked to western Riverside County (1202.3 Dry Metric Tons) or Otay Mesa in San Diego County (123.5 Dry Metric Tons) for direct land application to agricultural fields by Wheelabrator Water Technologies Inc. Some dewatered

**City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT - 1998**

Location: San Luis Rey Wastewater Treatment Plant – Continued:

sludge was trucked to Arizona (146.8 Dry metric Tons) to the Copper Mountain Landfill during wet periods when land application was discontinued.

The land application is according to the EPA's protocol for Class B biosolids. The sludge was incorporated into the ground within 24 hours according to Riverside County Ordinance #696. All 1998 hauling was done under contract with Waste Management of North County.

Total Sludge Generated in 1998: 1472.6 Dry Metric Tons

Sludge Delivered to Wheelabrator Bio Gro: 1325.8 Dry Metric Tons

Address of Land Application Facility: Wheelabrator Water Technologies
Bio Gro Division
18500 Von Karman Avenue, Ste. 900
Irvine, California 92612
714-476-4080

Sludge Delivered to Arizona Landfill: 146.8 Dry Metric Tons

Address of Next Preparer: Copper Mountain Landfill
35 East County 12th Street
Welton, Arizona 85356
520-782-6355

City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT - 1998

Location: San Luis Rey Wastewater Treatment Plant –
Continued:

Pollutant Concentrations (Metals): January to December 1998, analyzed monthly but reported as bimonthly averages on Notice and Necessary Information (NANI) certifications. These are attached.

The data below is taken from the monthly data sheets. Metals are expressed as Total and Units are mg/kg Dry Weight. All values are within Table 3 Limits.

§503.13 Pollutants	Table 3 Limits	Jan.	Feb.	March	April	May	June
Arsenic	41	<14	<14	<10	<10	<12	<15
Cadmium	39	3.79	3.50	4.73	3.70	4.51	5
Chromium	No Std.	24.8	27.0	23.8	20.4	24.8	31.6
Copper	1500	298	305	303	303	289	346
Lead	300	28.1	29.8	20	20	20	30
Mercury	17	1.38	1.88	1.49	1.93	2.19	2.13
Molybdenum	* 75	18.1	17.0	13.3	10.0	10.0	20
Nickel	420	27.6	61.5	84.2	84.2	80.4	64.5
Selenium	100	<16	<15	20	20	20	<17
Zinc	2800	671	709	801	780	801	924
% T.S.	No Std.	16.7	17.3	17.7	17.8	19.2	15.8

§503.13 Pollutants	Table 3 Limits	July	Aug.	Sept.	Oct.	Nov.	Dec.
Arsenic	41	4.15	3.61	7.18	6.78	7	8
Cadmium	39	10.1	4.53	3.64	3.69	3.88	3.98
Chromium	No Std.	61.5	32.4	28.4	28.9	31.0	30.1
Copper	1500	352	316	328	339	389	395
Lead	300	22.3	20	19	19.9	24.3	22.9
Mercury	17	2.3	1.69	1.29	1.74	1.52	1.43
Molybdenum	* 75	52.5	15.4	19.3	16.9	15.6	16.9
Nickel	420	82	39.9	38.5	49.1	41.3	38.4
Selenium	100	18.9	14.7	8	8	11.3	10
Zinc	2800	1010	1010	775	800	876	857
% T.S.	No Std.	16.1	16.7	16.1	16.8	15.8	15.2

- 75 – Molybdenum Limit from Table 1.

City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT - 1998

Location: San Luis Rey Wastewater Treatment Plant – Continued:

Pathogen Reduction: Class B requirements for direct land application in 503.32 (b) (2) Alternative 1 were met by the San Luis Rey WWTP for six bimonthly monitoring periods for January through December 1997. See attached Notice and Necessary Information (NANI) Certificates with the supporting laboratory report.

Vector Attraction reduction: The vector attraction reduction requirements in 503.33 (b) (1) or Option 1 were met by the San Luis Rey WWTP for the bimonthly monitoring periods for March through December 1998. The 38% reduction in volatile solids requirement was not achieved during January and February 1998. See attached NANI Certificates.

One of the three anaerobic digesters was down for repairs during 1997 and the beginning of 1998. This created a situation where the available hydraulic capacity limited the detention time within the digesters. The volatile solids reduction was close (January 36.2% and February 34.6%) to the requirements during the two months of non-compliance. The plant would monitor the values daily and send Wheelabrator the results weekly. The third digester was put into operation on April 13, 1998. This corrected the deficiency. Most of the sludge was hauled to Arizona for disposal in a landfill during February due to heavy rains.

Wheelabrator incorporates the sludge into the soil within 24 hours as required by Riverside County Ordinance #696. Their usual practice is to incorporate the sludge within six hours. This would satisfy the vector attraction reduction option 503.33 (b) (10) but they cannot certify that this happened 100% of the time. Wheelabrator is immediately notified if our wastewater treatment plant experiences a problem and the reduction is going to be less than 38% for several days. Wheelabrator will incorporate the sludge within six hours thereby satisfying option 503.33 (b) (10) until our conditions improve.

**City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT 1998**

Date: February 16, 1999

Name of Generator: City of Oceanside Water Utilities Department

Location: La Salina Wastewater Treatment Plant
1330 South Tait Street
Oceanside, California 92054

Mailing Address: City of Oceanside
Water Utilities Department
300 North Coast Highway
Oceanside, California 92054-2885

Contact Person: Guss Pennell, Environmental Regulatory Compliance Officer

Telephone: 760-966-8795

Flow MGD (average): 3.7 MGD

Plant Description: The La Salina Wastewater Treatment Plant (WWTP) is an activated sludge treatment facility that has a design capacity of 5.5 MGD. It is a Class I sludge management facility with an approved pretreatment program.

Sludge Treatment Process: Primary clarifier sludge is pumped into the primary anaerobic digester that is mechanically mixed and heated. Waste activated sludge is thickened in a dissolved air floatation unit and pumped into the primary anaerobic as well. Digested sludge is then transferred into a secondary anaerobic digester that is not heated. Each digester has a capacity of 630,000 gallons.

The treated sludge is injected with hydrogen peroxide for odor control prior to dewatering with two 2.2-meter filter belt presses. The dewatered sludge (16.2% Total Solids Annual Average) was loaded into 30 cubic yard end dump trailers and trucked to western Riverside County (399.6 Dry Metric Tons) or Otay Mesa in San Diego County (41.5 Dry Metric Tons) for direct land application to agricultural fields by Wheelabrator Water Technologies Inc. Some dewatered sludge was trucked to Arizona (48.7 Dry Metric Tons) to the Copper Mountain Landfill during wet periods when land application was discontinued.

The land application is according to the EPA's protocol for Class B biosolids. The sludge was incorporated into the ground within 24 hours according to Riverside County Ordinance #696. All 1998 hauling was done under contract with Waste Management of North County.

**City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT 1998**

Location: La Salina Wastewater Treatment Plant – Continued:

Total Sludge Generated in 1997: 489.8 Dry Metric Tons

Sludge Delivered to Wheelabrator Bio Gro: 441.1 Dry Metric Tons

Address of Land Application Facility: Wheelabrator Water Technologies
Bio Gro Division
18500 Von Karman Avenue, Ste. 900
Irvine, California 92612
714-476-4080

Sludge Delivered to Arizona Landfill: 48.7 Dry Metric Tons

Address of Next Preparer: Copper Mountain Landfill
35 East County 12th Street
Welton, Arizona 85356
520-782-6355

City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT 1998

Location: La Salina Wastewater Treatment Plant – Continued:

Pollutant Concentrations (Metals): January to December 1998, analyzed monthly but reported as bimonthly averages on Notice and Necessary Information (NANI) certifications. These are attached.

The data below is taken from the monthly data sheets. Metals are expressed as Total and Units are mg/kg Dry Weight. All values are within Table 3 Limits.

§503.13 Pollutants	Table 3 Limits	Jan.	Feb.	March	April	May	June
Arsenic	41	<14	<13	<10	<10	20	20
Cadmium	39	3.30	3.26	3.99	3.42	4	4
Chromium	No Std.	24.3	37.4	53.9	60.8	68.0	61.2
Copper	1500	286	392	449	397	473	478
Lead	300	31.2	44.2	54.8	43.0	40	50
Mercury	17	1.52	1.44	2.05	1.67	1.94	1.92
Molybdenum	* 75	17.2	8	6	<6	6	7
Nickel	420	30.2	114	143	145	224	214
Selenium	100	<16	<15	<20	<20	<16	<17
Zinc	2800	645	859	829	742	756	848
% T.S.	No Std.	16.7	17.8	17.2	16.6	16.5	15.8

§503.13 Pollutants	Table 3 Limits	July	Aug.	Sept.	Oct.	Nov.	Dec.
Arsenic	41	2.43	2.90	4	5	8	8
Cadmium	39	12.7	2.93	3.29	4.21	4.08	3.71
Chromium	No Std.	28.7	23.2	21.8	22.3	24.9	22.0
Copper	1500	364	339	369	376	416	400
Lead	300	37.8	34.0	38.5	37.6	41.4	38.2
Mercury	17	2.1	1.96	1.74	1.21	1.73	1.61
Molybdenum	* 75	4.66	5.24	8	8	8.43	8
Nickel	420	66.9	47.4	37.0	37.6	44.8	36.4
Selenium	100	10.4	12.7	6	10	10	8
Zinc	2800	988	888	836	845	955	893
% T.S.	No Std.	16.4	16.6	16.7	17.3	16.6	16.8

- 75 – Molybdenum Limit from Table 1.

Location: La Salina Wastewater Treatment Plant – Continued:

City of Oceanside
SEWAGE SLUDGE ANNUAL REPORT 1998

Pathogen Reduction: Class B requirements for direct land application in 503.32 (b) (2) Alternative 1 were met by the La Salina WWTP for six bimonthly monitoring periods for January through December 1998. See attached Notice and Necessary Information (NANI) Certificates with the supporting laboratory report.

Vector Attraction reduction: The vector attraction reduction requirements in 503.33 (b) (1) or Option 1 were met by the La Salina WWTP for the six bimonthly monitoring periods for January through December 1998. The 38% reduction in volatile solids requirement was achieved during the entire year. See attached NANI Certificates.

Wheelabrator incorporates the sludge into the soil within 24 hours as required by Riverside County Ordinance #696. Their usual practice is to incorporate the sludge within six hours. This would satisfy the vector attraction reduction option 503.33 (b) (10) but they cannot certify that this happened 100% of the time. Wheelabrator is immediately notified if our wastewater treatment plant experiences a problem and the reduction is going to be less than 38% for several days. Wheelabrator will incorporate the sludge within six hours thereby satisfying option 503.33 (b) (10) until our conditions improve.